



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,780	07/14/2003	Samuel D. Hawkins	1249-000019	7324
27572	7590	10/10/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			BASICHAS, ALFRED	
		ART UNIT	PAPER NUMBER	
			3749	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/618,780	HAWKINS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alfred Basichas	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 July 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,5-12,14,16-20 and 22-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,5-12,14,16-20 and 22-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Allowable Subject Matter***

1. After further consideration the examiner has come to realize that the subject matter previously indicated allowable is in fact obvious as a matter of design choice and spatial considerations. The examiner sincerely apologizes for any inconvenience imposed on applicants. Accordingly, this action is made non-final, so as to provide applicant with the opportunity to respond to the new grounds for rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 5, 6, 8, 9, 12, 14, 16, 18-20, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forster (1,908,135), which shows all of the claimed limitations. Forster discloses, among other things,

1. A burner (see at least fig. 1), comprising: a burner body 10,11,12 including an inlet opening at one end 10 thereof and an outlet opening 12 at a second end thereof; a nozzle assembly 21,24 disposed in said outlet opening of said burner body, said nozzle assembly including a disc-like member 24 having a central hole 26 therein and a plurality of radially spaced holes 27 spaced around a perimeter of said central hole, and a tube member 21 disposed in said central hole and extending axially beyond said outlet opening of said burner body (see at least fig. 1).

2. The burner according to claim 1, wherein said tube member includes a first end 19 and a second end 21 wherein said first end has a larger diameter than said second end (see at least fig. 1).

9. A nozzle for a burner, comprising: a disc-like member having a central hole therein and a plurality of radially spaced holes spaced around a perimeter of said central hole; and a tube member disposed in said central hole and including a first end and a second end wherein said first end has a larger diameter than said second end. (see previous claims)

12. A burner, comprising: a burner body including an inlet opening at one end thereof and an outlet opening at a second end thereof; a nozzle assembly disposed in said outlet opening of said burner body, said nozzle assembly including a disc-like member having a central hole therein and a plurality of radially spaced holes spaced around a perimeter of said central hole, and a tube member disposed in said central hole, said tube member including an upstream end and a downstream end wherein said upstream end has a larger diameter than said downstream end. (see previous claims)

20. A method of tuning a burner for use in different applications, comprising the steps of: providing an elongated burner body having an inlet opening and an outlet opening; mounting a nozzle assembly in said outlet opening of said elongated burner body, said nozzle assembly including a disc-like member having a central hole therein and a plurality of radially spaced holes spaced around a perimeter of said central hole, and a tube member disposed in said central hole, said tube member being positioned to extend axially from a front and rear

surface of said disc-like member such that an axial position thereof is predetermined based upon the burner application. (see previous claims)

It should be understood that it is inherent that the relative position of the tube is "predetermined", so as to attain the desired flow parameters.

Forster does not specifically recite the pockets, lips, flanges, or bracket arrangement.

Nevertheless, the claimed components and arrangement are an obvious modification based on design choice, and depends on spatial considerations. In view of the absence ***in the originally filed disclosure*** of criticality for this particular design, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate it into the invention disclosed by Forster, so as to provide for spatial considerations.

6. Claims 1, 2, 5, 6, 8, 9, 12, 14, 16, 18-20, and 22-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Hollingshead (5,186,620), which shows all of the claimed limitations. Hollingshead discloses, among other things,

9. A nozzle for a burner, comprising: a disc-like member 20 having a central hole 30 therein and a plurality of radially spaced holes 31 spaced around a perimeter of said central hole; and a tube member 30 (integral) disposed in said central hole and including a first end and a second end wherein said first end has a larger diameter than said second end. (see at least fig. 5)

20. A method of tuning a burner for use in different applications, comprising the steps of: providing an elongated burner body having an inlet opening and an outlet opening; mounting a nozzle assembly in said outlet opening of said elongated burner body, said nozzle assembly including a disc-like member having a central hole therein and a plurality of radially spaced holes spaced around a perimeter of said central hole, and a tube member disposed in said central hole, said tube member being positioned to extend axially from a front and rear surface of said disc-like member such that an axial position thereof is predetermined based upon the burner application. (see previous claim)

It should be understood that it is inherent that the relative position of the tube is "predetermined", so as to attain the desired flow parameters.

Hollingshead does not specifically recite the pockets, lips, flanges, or bracket arrangement. Nevertheless, the claimed components and arrangement are an obvious modification based on design choice, and depends on spatial considerations. In view of the absence ***in the originally filed disclosure*** of criticality for this particular design, it

would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate it into the invention disclosed by Hollingshead, so as to provide for spatial considerations.

7. Claims 1, 2, 5-12, 14, 16-20, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogden (4,702,691), which shows all of the claimed limitations. Ogden discloses, among other things,

9. A nozzle for a burner, comprising: a disc-like member (see at least end cap in fig. 5) having a central hole (hollowed out space) therein and a plurality of radially spaced holes 82 spaced around a perimeter of said central hole; and a tube member 84 disposed in said central hole and including a first end and a second end wherein said first end has a larger diameter than said second end (see at least fig. 5).

10. The nozzle according to claim 9, wherein said tube member is welded to said disc-like member.

11. The nozzle according to claim 9, wherein said center hole in said disc-like member has a diameter that is greater than half of a diameter of said disc-like member.

Ogden does not specifically recite the pockets, lips, flanges, or bracket arrangement. Nevertheless, the claimed components and arrangement are an obvious modification based on design choice, and depends on spatial considerations. In view of the absence *in the originally filed disclosure* of criticality for this particular design, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate it into the invention disclosed by Ogden, so as to provide for spatial considerations.

### ***Response to Arguments***

8. Applicant's arguments with respect to the claim have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272 4871. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571 272 4828. The fax phone numbers for the organization where this application or proceeding is assigned are 571 273 8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.

September 26, 2006



Alfred Basichas  
Primary Examiner